

culate Student's *t*-test for either independent or paired cases; it provides a *t* value, *p* value, degrees of freedom and, most important, confidence intervals. The  $\chi^2$  test provides similar results (with Yates' continuity correction). Unfortunately, neither test provides much information about the statistical heterogeneity of the samples, which is of little comfort for those conducting systematic reviews. As well, StatMost cannot compute a stratified analysis. For epidemiologists there is limited information. StatMost does not compute odds ratios or relative risks, nor can it calculate sensitivities or predictive values.

A strength of StatMost is the *User's Handbook*. It is logically organized and easy to read. All of the algorithms used in the program are provided in sequence, not tucked away in some appendix (as is common in many manuals for statistical programs). Chapter 7 of the manual also includes a dictionary of terms used in the manual, with explanations.

The graphics are as good as any I have seen previously. The program is WYSIWYG (what you see is what you get), and offers a wide array of two-dimensional and three-dimensional graphics, including bar, chart, stacked and line graphs. Graphical representation of data can be accomplished with little frustration. A minor irritant is the difficulty in labelling legends.

Another drawback to the program is the cost — approximately \$390 for the standard program and \$467 for the extended one. This is considerably more expensive than other programs that can do most of what StatMost can do and more. Therefore, the software may not be worth the cost, particularly for epidemiologists.

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## THE COMING PLAGUE: NEWLY EMERGING DISEASES IN A WORLD OUT OF BALANCE

Laurie Garrett. 750 pp. Illust. Farrar, Straus and Giroux, New York. 1994. \$27.50. ISBN 0-374-12646-1

**Overall rating:** Excellent  
**Strengths:** Thoroughly researched; provides an urgent message for the 21st century  
**Weaknesses:** Sheer size; attempts to cover too many events in too much detail  
**Audience:** Anyone interested in how infectious diseases may influence modern-day civilization

This remarkable book lies somewhere between a textbook of microbial ecology and a science-fiction novel. The subtitle — *Newly Emerging Diseases in a World Out of Balance* — is the theme in an account of changing patterns of infection during the last 50 years. Subjects include Legionnaires' disease, toxic shock syndrome and hantavirus pulmonary syndrome in the United States, as well as exotic "new" diseases caused by Machupo, Marburg, Lassa and Ebola viruses. Garrett also describes the increasing threat from "older" diseases, such as malaria and tuberculosis, that have taken on new importance because of the emergence of multiple-drug-resistant organisms. Much of the story is told through the personal experiences of the "disease cowboys," a term Garrett uses for the front-line scientists and field epidemiologists who piece together the puzzles of various disease outbreaks, often at serious risk to their own health.

Garrett ascribes much of the growing imbalance in the struggle between microorganisms and *Homo sapiens* to man's destruction of the world's rainforests, social upheavals, population shifts and jet travel, all of which provide unprecedented opportunity for new encounters in a shrinking global village. The first sentence of the book recounts the childhood recollections of the au-

thor's uncle, a physician, about the great influenza pandemic of 1918 and 1919, which claimed nearly 22 million lives worldwide. Garrett tabulates this and other serious influenza pandemics dating back to 1510, but fails to put these massive tolls of human life in years long past into the context of her perception of a world that has only recently fallen out of balance. The swine flu threat of 1976 may have fizzled, but a new strain of influenza, with an airborne route of transmission and an incubation period of only 1 to 3 days, is more likely to cause millions of deaths around the world in a short time frame than any of the fearsome, exotic diseases from distant jungles.

The lengthy chapter on human immunodeficiency virus (HIV) is particularly informative. It is backed up by 18 pages of notes, including detailed tables and diagrams as well as numerous references to scientific publications. For people interested in the emergence of HIV types 1 and 2 as human pathogens and their relation to primate viruses, the book presents a more readable and authoritative account than I have found elsewhere.

Each chapter has extensive endnotes, more than 1300 in total, contained in a section at the end of the book. Although the endnotes add immeasurably to the usefulness and interest of this book, the headings of this section do not include the name of the corresponding chapter. The reader is obliged to flip back and forth through the notes, searching for the beginning of each numbered section.

The theme of this book is best captured in the chapter entitled "Thirdworldization: the interactions of poverty, poor housing, and social despair with disease." This chapter contains a powerful message for politicians bent on dismantling, in the name of health care reform and economic restraint, the existing networks of public health surveillance

and communicable disease control established over many years. Garrett points to worldwide vigilance as our best hope for spotting the next microbial "hot zone" in time to minimize its effect.

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## UNCHAINED MEMORIES: TRUE STORIES OF TRAUMATIC MEMORIES, LOST AND FOUND

Lenore Terr. 273 pp. Basic Books, New York. 1994. \$18 (US). ISBN 0-465-09539-9

**Overall rating:** Excellent

**Strengths:** Reads like a detective story about a subject that can be dry; written compassionately, from a clinician's point of view

**Weaknesses:** Scientific sections drag, in contrast to the rest of the book

**Audience:** The public and health care professionals

One January afternoon, Eileen gazes into her red-headed daughter's clear blue eyes, illuminated by shafts of sunlight through the slats of the window blinds. She is gripped by the realization that she has seen such eyes before, but their light was extinguished forever 20 years earlier. She had witnessed the murder of her best friend, Susan, at the hands of her own father. The

memory had gone underground until that moment.

In this compelling series of true stories, the repression of painful memories and the way they resurface is explored. The book describes the process of memory — perception, storage and retrieval — as viewed by various psychologists, psychiatrists and philosophers throughout the ages.

Dr. Lenore Terr, a clinical professor of psychiatry at the University of California in San Francisco medical school, has spent a large portion of her professional life as a child psychiatrist, studying the effects of childhood trauma on patients. She initially focused on the consequences of repeated physical abuse. She then began to look at single incidents of severe trauma in a child's life and their effect. She is known for her study of 26 Chowchilla, Calif., school children who were kidnapped on July 15, 1976, from their bus and returned 27 hours later physically unharmed. She found that, if only a single traumatic incident occurred, then the experience would remain clearly etched in the person's memory, as one dreadful event in an otherwise atraumatic existence. Such a memory is retained in a remarkably consistent manner over the years.

She differentiates between Type 1 victims, who experience a single incident of trauma, and Type 2 victims, who have repeated traumatic incidents. Terr espouses the idea that repeated trauma, in particular, sets up new rules for memory. The concept of memory repression is described as an unconscious and energetic process of defending against remembering. It

is distinguished from forgetting in that it is not only defensive but also unconsciously conflicted. For a repressed memory to return, a safe time and place and a triggering event are required. A strong stimulus or cue through any of the five senses can induce a childhood memory to return. Such a memory is slightly flawed by an active and developing mind. The gist of the memory stays true, but the details are sometimes clouded. For example, Patricia Bartlett, who was present when her mother was burned to death and who dissociated after this event, used the defence mechanism of dissociation unconsciously under similar circumstances involving a threat of abandonment, loss or death in later life. If repression is a burial of memory, dissociation is a "sidewise slippage."

Gary Baker, one of the world's expert river divers, has always been fascinated by water. His mother attempted to drown him numerous times and sexually abused him as a child. He now studies how the brain remembers.

The issue of "false memory syndrome" is examined through the case of a child who accuses her two therapists of sexually abusing her. Terr believes it is unlikely that the alleged acts ever took place.

This book is an artful and riveting examination of a complex and controversial subject that has fascinated scientists for more than a century. Long after this book has been put on a shelf, the images of these children's experiences remain etched in the reader's mind.

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